

State Wildlife Grant Proposal  
Forest Preserve District of Cook County  
536 N. Harlem Ave.  
River Forest, IL 60305

Contact: Michelle Uting, Grant Administrator, Tel. 708-771-1157, [michelle.uting@cookcountyil.gov](mailto:michelle.uting@cookcountyil.gov)

Project number:

T-102-D-1

Project title:

Restoration of King Rail Habitat

Background:

The Forest Preserve District of Cook County, the country's oldest and largest conservation district, manages more than 69,000 acres of diverse habitat and serves the more than five million residents of Cook County with environmental education and recreation opportunities. Countless plants and animals call these preserves home, including more than 112 threatened and endangered species.

Crabtree Preserve is a remarkable is a 1,600 acre preserve in northwest Cook County in Palatine, Illinois and is owned and managed by the Forest Preserve District of Cook County.

In the 1800s this area contained a rich array of prairie, woodlands, and wetlands, but once the settlers arrived, the landscape experienced profound changes. The prairies were plowed, the forests logged, and wetlands and marshes were drained and altered. In the 1960s this site was purchased by the Forest Preserve District of Cook County and a long-term restoration effort began. Restoration work has been conducted by contractors and Forest Preserve staff, and is supported by a dedicated cadre of volunteers who contribute mightily in removing invasive plants and brush.

Crabtree Preserve is part of the migratory flyway- 260 species of birds have been observed here and more than 80 nest here. In particular, the many wetlands have made this site popular with marsh birds including the king rail. Wildlife biology staff has been monitoring king rail and other marsh birds for over 30 years since the early 1980s.

Need:

The king rail (*Rallus elegans*) is an Illinois endangered species, having the dual problem of reduced habitat and detection challenges. The US Fish and Wildlife Service's King Rail Conservation Plan (<file:///Z:/USER%20DATA/MUting/Grant%20Applications/IDNR%20Wildlife/kingrailconservationplan.pdf>) describes the species as having national and Midwest regional populations in steep decline, and an Illinois statewide population of <100 individuals. Amazingly, in the state's most urban and densely populated county, the species maintains a foothold. The king rail is known from the Crabtree Preserve in Cook county, a 1,600 acre site, where it has been detected regularly since the 1980s, mainly as a migrant stopping over during spring and fall migration. In 2013, a mating pair was located and young were hatched. These young were measured and banded. The nesting and rearing location was in a wetland that had been restored a few years earlier by breaking tile and removing brush (a recovery

strategy outlined in the Illinois Wildlife Action Plan). The main limiting factors, as described by the national king rail working group includes the loss of wetlands and the degradation of remaining wetlands from invasive, non-native plants species. Currently, Crabtree Preserve has a series of potentially excellent habitat pockets that are in need of structural restoration which we believe will provide expanded habitat of similar quality to the known nesting location. These wetlands and proximate upland areas have been overrun with invasive brush, which discourages use by many threatened aquatic species, including marsh birds and in particular king rail.

#### Purpose and Objectives:

The objectives of the proposed project are:

- 1) To restore 35 acres of habitat for king rail at a known breeding site
- 2) Document breeding success of existing pairs
- 3) Band adults and young to inform site fidelity
- 4) Collect data correlating habitat restoration and king rail use

Since the Illinois statewide population, as estimated in the King Rail Conservation Plan, was under 100 pairs, the 2014 documentation of a nesting pair in a recently restored wetland is encouraging and suggestive of potential opportunities to expand habitat and increase nesting. Because Crabtree Preserve has many wetlands in close proximity to last year's nesting site, with suitable hydrology, but unsuitable structure due to brush invasion, the chances of a successful habitat restoration are high. Numerous king rails use the site during migration and we expect to attract some of these migrants to remain on site after suitable habitat is provided.

Forest Preserve wildlife biologists banded three of the 2014 young of the year and tracked their survival until migration. Continuation and expansion of this monitoring to newly restored sites will further our knowledge of habitat needs, predation rates, site fidelity, and breeding success.

#### Results of benefits expected:

This project is anticipated to have positive outcomes for king rails including:

- Restoration of 35 acres to significantly expand suitable king rail habitat at a site with a long history of use and a recent nesting history
- Will band all located adults and young during focused marsh bird surveys more refined understanding of habitat selection and expansion
- detailed account of breeding success rates
- site fidelity/return rates

Restoration of this site will expand much needed habitat for this state endangered species that faces stresses from habitat fragmentation, hydrologic disturbance, invasive and exotic species, and changes to the composition and structure of marsh habitat. This project will address and reduce all of these stressors at the Crabtree site for king rail. The project also builds on previous investments over the last four decades by the Forest Preserves and volunteers to restore Crabtree Preserve to ecological health.

We expect this work to benefit other species with similar habitat needs, including other marsh birds, as well as amphibian populations. Information gathered by this project is intended to inform other restoration efforts by the Forest Preserves, and can be shared with other land management agencies. This project would help to overcome several of the challenges stated in Illinois' Comprehensive Wildlife Conservation Plan & Strategy (p.1&2), including:

Challenge 1. Increase the percentage of Illinois' lands which are not plowed, paved, drained, or landscaped.

Challenge 2. Increase the quality of Illinois' natural lands as measured by their ability to support robust (abundance and richness) communities of native plants and animals.

Challenge 5. Restore populations of plant and animal species that have become rare or are declining.

Challenge 6. Eradicate, control, and prevent the introduction of invasive exotic species.

Another anticipated outcome of this project is the protection of a species that is part of the Midwest's natural heritage – a landscape that is needed, utilized, and valued by the more than five million resident of Cook County. The Forest Preserves' 69,000 acres provide people with education and recreation activities, and most importantly, the opportunity to have a place to experience nature and escape the stresses of everyday urban living. The many native plants and animals, including the king rail, and 112 threatened and endangered species, that call this landscape home should be treasured and protected so that all can enjoy and benefit from a healthy environment.

#### Approach:

The Forest Preserve District of Cook County proposes to utilize, in combination with observed habitat use on-site, habitat guidelines drawn up by the US Fish and Wildlife Service to restore 35 acres of wetland habitat for king rails. The activities that will be accomplished by this project include removal of invasive brush such as buckthorn.

The restoration will mimic known breeding habitat for the benefit of king rail and other marsh bird species. King rail pairs will be located via standard detection protocols across the site, and biological and ecological data will be collected. Pairs will be monitored to assess nest location, survivorship of young, and predation rates. Forest Preserve will conduct all monitoring. This information will be used to further refine habitat preferences and to collect basic breeding information for the species in northern Illinois.

#### Geographic location:

Crabtree Preserve is a 1,600 acre preserve in northwest Cook County. The proposed project will take

place near the Crabtree Nature Center located at 3 Stover Road, Barrington, Illinois. T42N ,R09E S14&23  
(42 06' 50"N, 88 09' 38" W)

Please see attached map

Project budget narrative and justification:

<b>Budget Categories</b>	<b>Federal Funds</b>	<b>Non-Federal Funds</b>	<b>Total</b>
<b>Salaries and Wages</b>			
Administrative/Professional			\$0.00
Academic / Graduate Hourly Wages			\$0.00
Other Title			\$0.00
Tuition Remission			\$0.00
<b>Subtotal</b>			\$0.00
<b>Fringe Benefits</b>			
Administrative/Professional			\$0.00
Academic / Graduate Hourly Wages			\$0.00
Other Title			\$0.00
<b>Subtotal</b>			\$0.00
<b>Travel</b>			
<b>In-State</b>			
Meals / Per Diem			\$0.00
Lodging			\$0.00
Mileage			\$0.00
<b>Out-of-State</b>			
Meals / Per Diem			\$0.00
Lodging			\$0.00
Mileage			\$0.00
<b>International</b>			
Meals / Per Diem			\$0.00
Lodging			\$0.00
Mileage			\$0.00
<b>Subtotal</b>			\$0.00
<b>Equipment</b>			
			\$0.00
<b>Subtotal</b>			\$0.00
<b>Materials and Supplies</b>			
			\$0.00
<b>Subtotal</b>			\$0.00

<b>Contractual Services</b>			
			\$0.00
<b>Subtotal</b>	\$80,000.00	\$43,095.00	\$0.00
<b>Other</b>			
			\$0.00
<b>Subtotal</b>			\$0.00
<b>Total Direct Costs</b>	\$80,000.00	\$43,095.00	\$123,095.00
<b>Modified Total Direct Cost (MTDC)</b>	\$80,000.00	\$43,095.00	\$123,095.00
<b>Indirect Rate of 20 %</b>	\$0.00		\$0.00
<b>Indirect Rate of ____ . __ %</b>		\$0.00	\$0.00
<b>Unrecovered Indirect Rate (20% vs ____ . __ % MTDC)</b>		\$0.00	\$0.00
<b>Overmatch</b>			\$0.00
<b>Total Project Costs</b>	\$80,000.00	\$43,095.00	\$123,095.00
<b>Percentage of Total Project Cost</b>	100.00%	0.00%	100.00%

Budget Justification:

The Forest Preserve District proposes to hire a contractor to conduct restoration activities at the site - these will include removal of invasive vegetation, including buckthorn.

Year 1: cut 35 acres of brush using a combination of low-psi tracked bobcat and hand cutting, and initial treatment of re-sprouts via foliar application of herbicide; 35ac@\$2,500/ac = \$87,500

Year 2: herbicide follow-up treatment; 35ac @\$1,017/ac = \$35,595

Multipurpose projects:

N/A.

Relationship with other grants:

We are not aware of any grant funded projects similar to ours.

Timeline:

<b>Action</b>	<b>Fall 2015</b>	<b>Winter 2015</b>	<b>Spring 2016</b>	<b>Summer 2016</b>	<b>Fall 2016</b>	<b>Winter 2016</b>	<b>Spring 2017</b>	<b>Summer 2017</b>	<b>Fall 2017</b>
<i>Gather and organize available king rail data</i>	<b>X</b>								
<i>Identify and hire</i>	<b>X</b>								

<i>restoration contractor</i>									
<i>Conduct restoration activities: brush removal</i>		<b>X</b>			<b>X</b>	<b>X</b>			
<i>Conduct restoration activities: resprout control</i>				<b>X</b>				<b>X</b>	
<i>Monitoring and banding of king rail</i>			<b>X</b>	<b>X</b>			<b>X</b>	<b>X</b>	
<i>Share information</i>							<b>X</b>	<b>X</b>	<b>X</b>
<i>Complete project/submit final report</i>									<b>X</b>

Project Personnel:

The following Forest Preserve District staff will oversee and be responsible for the implementation of this project:

**Chris Anchor**, Wildlife Biologist III, Forest Preserve District of Cook County

Tel. 847-798-0354, [chris.anchor@cookcountyil.gov](mailto:chris.anchor@cookcountyil.gov)

Poplar Creek Field Station, 28 W. 040 State, Route 58, Elgin, IL 60120

**Charles O'Leary**, Resource Ecologist III, Forest Preserve District of Cook County

Tel. 708-771-1008, [Charles.oleary@cookcountyil.gov](mailto:Charles.oleary@cookcountyil.gov)

General Headquarters, 536 N. Harlem, River Forest, IL 60305

General:

The project statement describes a need consistent with the State Wildlife Grants (SWG) program; states a purpose and sets objectives, both of which are based on the need; uses a planned approach, appropriate procedures, accepted principles of research, and is cost effective.

Compliance:

The IDNR will use its CERP (Comprehensive Environmental Review Process) as a tool to aid the Department in meeting NEPA compliance for the project outlined under this grant proposal. It is the Department's policy to require CERP applications for all land disturbing activities unless those activities are covered by CERP exemptions.

All planned activities will also be in compliance with the Endangered Species Act. All determinations and documentation will be in accordance with the current established U.S. Fish and Wildlife Service protocols for section 7.

All planned activities will be in compliance with the National Historic Preservation Act and the Council on Historic Preservation Act. All determinations and documentation will be in accordance with the terms of the Programmatic Agreement, as amended, effective September 23, 2002.

The activities supported by this grant for this project statement do not involve any other federal compliance issue.

## References

Illinois Department of Natural Resources, 2005. Illinois Comprehensive Wildlife Conservation Plan & Strategy. Illinois Department of Natural Resources. Version 1. Springfield, IL. 353pp.

Cooper, Thomas R. (Plan Coordinator). 2008. King Rail Conservation Plan, Version 1. U.S. Fish and Wildlife Service, Fort Snelling, Minnesota. 121pp.